

Syracuse University

SURFACE

Syracuse University Honors Program Capstone Projects Syracuse University Honors Program Capstone Projects

Spring 5-5-2015

Digital Innovations, Environment and Fashion

Avery Gray
Syracuse University

Follow this and additional works at: https://surface.syr.edu/honors_capstone



Part of the [Art Practice Commons](#)

Recommended Citation

Gray, Avery, "Digital Innovations, Environment and Fashion" (2015). *Syracuse University Honors Program Capstone Projects*. 911.

https://surface.syr.edu/honors_capstone/911

This Honors Capstone Project is brought to you for free and open access by the Syracuse University Honors Program Capstone Projects at SURFACE. It has been accepted for inclusion in Syracuse University Honors Program Capstone Projects by an authorized administrator of SURFACE. For more information, please contact surface@syr.edu.

© (Avery Gray. April 26th 2015)

Abstract

Digital Innovations, Environment and Fashion is the title of my senior Capstone thesis project for the Bachelor of Fine Arts degree in Fashion Design at Syracuse University. For this project, I designed a collection of six complete outfits that explore the theme of the natural environment and technology. The thesis project was presented in a public fashion show at Syracuse University at the end of April 2015.

In this creative reflective essay, a brief history of technology in fashion design will be explored. In chapter two, my inspirations and research in fashion design, art, and photography all support my decisions for choosing and expanding on my Capstone topic. The last portion of this essay is dedicated to an explanation of my design process and to a discussion of the creation of my collection in the spring of 2015.

Executive Summary

Fashion, a term too often associated with the superficial, is in actuality a medium for cultural critique and self-expression. Fashion can comment on gender, ethnicity and class. It is, as Miuccia Prada says, “how you present yourself to the world. Fashion is instant language.” This language speaks about the times in which we live.

One of the shared features of great societies has been the creative and critical influence of their art and design. The mindset of every generation has always been reflected in fashion, whether it trends towards subcultures, the mainstream or couture; at the end of the spectrum, all are produced with progressive, experimental and creative ideals. My hope is that my Capstone will resonate with the audience, sparking critical thinking about the decisions made in the production and concepts of my collection.

Digital Innovations, Environment and Fashion is the title of my senior Capstone project for the Bachelor of Fine Arts degree in Fashion Design at Syracuse University. For this Capstone, I have produced a collection of six complete outfits that celebrate and explore environmental issues through landscape photography, materials and the use of technology, helping me create depth and texture in my garments.

The completion of the collection ended with a final runway-exhibited showcase for all the senior fashion design students at Syracuse University. The collection was an experiment in understanding the human element in regards to technology, environment and fashion. I used digital printing and laser cutting in my collection as a way to translate environment and landscape into wearable designs. These innovations helped me translate my concepts into inspiring cultural statements about contemporary life through fashion design.

I have always had an interest in the environment as a source of inspiration. There are endless variations of texture, light, shape and form that can be manipulated and changed into new inspiring ideas when translated into wearable objects. I have a particular interest in aerial photography and how looking at the landscape from a different perspective changes when there is no horizon line in the view. Photographer Edward Burtysky's work, *Water*, was very influential in my decision to take inspiration from the environment. His aerial images change the landscape into a print, which transitions from environment to environment.

The landscape is something that can be simultaneously experienced as well as represented through the "lens" of another medium, such as photography. An image of a landscape metaphorically transports you to that location, establishing multiple ways of referencing memories and understandings of a place. These images of the earth from above transported me to that landscape, looking at the depth and layers of the image. Photographs reveal copious amounts of information, which allowed me to study the smallest intricacies of the landscapes and helped me understand their aesthetics and function. This furthered my inspiration and knowledge in the designing and production of this collection.

The use of the lens has been instrumental in the creation of my collection. All of the prints in the collection were taken from photographs I produced and manipulated in Photoshop. They transform from recognizable forms into surreal and interesting patterns reminiscent of a bold watercolor or abstract painting. Taking the photographs and turning them into my own prints was one of my best decisions for the collection because they became personal, connecting them back to me as the designer, and to the inspiration of environment.

I was first introduced to using photography as a way to create prints when I worked for Mary Katrantzou in London fall 2013. She is known for her digital manipulation of images to create wild and exuberant prints for her collections. She inspired me to experiment with this on

my own, as I was immediately drawn to the limitless options Photoshop gave me in the distorting and changing of images into something completely different. The collection includes six different prints that transition from look to look, changing in both color and design.

Digital and technological innovations abound in today's world. Fashion has for the past ten years been gradually exploring these innovations, creating unique and often culturally significant wearable objects. 3D printing, laser cutting and digital fabric printing have been developed and used by many designers in the fashion industry at both the experimental and production levels. I am one of the few students in the fashion design program at Syracuse University taking advantage of this available technology. My inkjet prints were outsourced; however, Syracuse had the tools available for me to pursue the use of laser-cut fabric.

The combining of environmentally inspired imagery with digital production methods speaks to the collaborative and conflating nature of our world. We are preoccupied with our mobile technology platforms, over-stimulated by screen culture and under-developed in our appreciation for life immediately around us. The point of my collection is to embody this tension between the natural and artificial and to explore human interaction with the environment and the garments themselves. The impact of technology is unavoidable in today's world. Using it as a tool to create garments that are tactile and inspiring creates a dialogue between modes of reality.

Clothing creates environment, producing an emotional relationship with the wearer. The colors, textures and prints of my garments have a physical effect on the wearer, as well as the audience, translating my inspirations into something relatable and real. My Capstone project will be a dialogue between the natural and artificial, utilizing digital tools in order to better my designs and realize my ideas to their fullest ability.

Table of Contents

Abstract.....	iii
Executive Summary.....	iv
Acknowledgements (Optional).....	viii
Chapter 1: A Short History of Fashion and Technology.....	1
Chapter 2: Inspirations.....	5
Chapter 3: Development and Production.....	9
Works Cited.....	19

Acknowledgements

I want to thank my faculty advisors Todd Conover and Jeffrey Mayer for giving me support and guidance throughout the year, as well as the Renée Crown Honors program for giving me the opportunity to be part of their program. It has been a great experience to be a student in the Fashion Design program at Syracuse University. After the completion of this project, I feel ready to take my leave and join the world of designers, artists and inventors who are making creative change and development irreplaceable in our world today.

Chapter 1

A Short History of Fashion and Technology

Digital Innovations, Environment and Fashion is the title of my senior Capstone project for the Bachelor of Fine Arts degree in Fashion Design at Syracuse University. For this Capstone, I will have produced a collection of six garments that celebrate and explore environmental issues through imagery, materials and the use of technology.

Fashion, a term too often associated with the superficial, is in actuality a medium for cultural critique and self-expression. Fashion can comment on gender, ethnicity and class. It is, as Miuccia Prada says, “how you present yourself to the world. Fashion is instant language.” The language of fashion speaks of the times in which we live.

Fashion design as a concept and industry began in the mid-19th century with Englishman, Charles Frederick Worth, who is credited with being the first fashion designer. He was known for designing and constructing collections of couture gowns that sold to Parisian socialites and royalty. Not only did he coin the term "fashion designer," but he also revolutionized the production and sales of garments. Because of this, designer-driven fashion began its rise in society, as fashion plates and magazines became ubiquitous in all cities and towns, providing people with the latest trends of the year.

As fashion became a way to display your status, ideals, preferences and economic value, it soon integrated itself into popular culture, both influencing and inspiring it. The growing availability of clothing in the late 1800s was due to the revolutionizing of the garment industry's production techniques, which made fashionable styles available to all. These seasonal *trends*, as we now know them, more often than not reflect social shifts in society. Whether it was during a

war or a time of great prosperity, silhouette, fabrication and consumer interest directed the changes in fashion design.

Fashion has always been integrated with the growth of technology as a source of improvement for both design and fabrication. Corsets could be considered fashion technology, as they mechanically changed the body shape to the desired aesthetic of the time. The modern sewing machine, developed in 1844 by John Fisher, followed by Isaac Singer, revolutionized production methods for garments. In the early 1900s, the availability of the automobile caused a rage in driving fashions. Women had their driving hats, overcoats and shoes, both practical and a sign of prosperity. The year 1938 brought about the first synthetic fiber, Nylon, allowing women the comfort of stockings that did not run. In the 1960s, the Space Age of fashion began. Garments were streamlined, inspired by popular culture's grip on space exploration, along with Neil Armstrong's moon landing in 1969. The integration between fashion and technology is undeniable, as developments have shifted aesthetics throughout the decades of fashion.

Today, we have come as far as digitally 3D-printing experimental garments and accessories such as bathing suits, shoes, jewelry and fabric-like structures. The laser cutting of fabric is becoming more widely used and less experimental in the industry to produce new and unimaginable shapes and textures. Ideas that could not have been realized in fabric 15 years ago are now made possible by these new technologies.

3D printing began as a prototyping technology in the mid 1980s. It was an industrial tool, solely used for the purpose of product development, rapid prototyping and data visualization, used mainly within metal industries. At its core, 3D printing is an additive process achieved by creating three-dimensional objects from a digital file. Layers upon layers of material are added

until the object is complete. It is then cleaned and ready to use in the application for which it was designed.

For the first time, in 2012, 3D printing was applied in experimental but wearable circumstances. Nike used 3D printing to manufacture its Vapor Laser Talon Football shoe, while New Balance started to use 3D printing to customize shoes for athletes. These technologies soon spread into the fashion industry, as designers explored the technology in high heeled shoes and accessories. In 2013, experimental collections of clothing were being fabricated from 3D printing techniques by designer Iris Van Herpen, in conjunction Neri Oxman, designer and professor at MIT's media lab. Iris speaks of her use of 3D printing in her collection *Voltage*, produced in 2013: "I find the process of 3D printing fascinating because I believe it will only be a matter of time before we see the clothing we wear today produced with this technology, it will be a great source of inspiration for new ideas" (Materialize, Iris 2013). Today almost anything can be 3D printed. From useful utilitarian objects, inspiring works of art, or life-saving prosthetics and organs, the applications are endless and becoming more widely available as the technology develops.

Laser cutting, another technology that has been integrated into the fashion industry, transforms fabric by applying a dense, high-energy light to its surface. The outcome of using the technique on fabric is clean-cut edges that are sealed and ready to wear, which makes this a useful design tool for fashion designers. The first application of a laser cutter took place in the late 1960s, when it was used to cut metals for aerospace applications. Today, the technology has been refined and transformed into an available tool for designers of all types, who use it on materials such as wood, metal, plastics and fabric.

There are several types of lasers, which have different concentrations of light. Because of this, certain types are used for specific materials. The CO2 laser is best for fabric because organic materials such as silk, leather, wool, easily absorb the laser's rays (Engadger, 2014). These clean cuts mean the fabric comes out without damage, scorching or other signs of manufacturing. Before laser cutting was used in the industry to make patterns in fabric, complex designs were cut by hand. Today, creating a digital file to submit to a computer cuts down on cost and time, making this a practical and interesting design tool for the fashion industry.

One of the shared features of great societies has been the creative and critical influence of their art and design. For instance, today, 3D printing and laser cutting are opening new creative doors for designer's to explore and realize their ideas in completely new and innovative ways. The mindset of every generation has always been reflected in fashion, whether it trends towards subcultures, the mainstream or couture; at the end of the spectrum, all are produced with progressive, experimental and creative ideals. American fashion designer Anna Sui has seen the industry grow for over 30 years. She states that,

I think that fashion has become such a big business and with globalization we are on new territory at this point. We are not just designing for a country we are designing for a world now. To me, fashion is like a mirror. It's a reflection of the times. And if it doesn't reflect the times, it's not fashion. Because people aren't gonna be wearing it.

Media and globalization have opened the doors for the fashion industry, allowing people to share their resources and technology, as well as their style. Our time in fashion is becoming a melting pot of old and new, the styled instead of the conventional. Anything goes; trends get recycled, making fashion ever-changing, developing and advancing in all areas of the industry.

Chapter 2

Inspirations

I first became interested in exploring technology as a medium while studying abroad in London in the fall of 2013. While there, I had the opportunity to intern with runway designer Mary Katrantzou, who inspired my interest in using these new technological innovations in fashion design. I worked with the embroidery team, developing designs for her Autumn/Winter 2014 collection. We used laser-cut embellishments and molded plastics in the designs. I also experienced Katrantzou's prolific development of digitally manipulated prints using photographs as imagery.

Katrantzou is a textile design graduate of Central Saint Martins in London who found her passion in womenswear. For her, "Print can be as definitive as a cut or a drape and allows a woman to filter beauty found in design in a subversive way." She creates all her prints digitally allowing for a huge spectrum of possibilities. "I can create possibility out of impossibility, surrealism out of realism" (Katrantzou, 2013). I have always appreciated print as an element of design; however, Katrantzou's use of the medium in fashion changed the way I think about surface pattern design. I now see print as a critical tool for emphasizing inspiration and creating new shapes and silhouettes.

In the collection that I was working on, Katrantzou had an interest in laser-cutting designs in colored acrylic plastic. Once laser-cut samples were made, we embroidered them onto her fabric garments to create three-dimensional patterns. She had used this technique in previous collections, sewing laser-cut embellishments on top of prints to mimic their patterns. The basis of her designs was colorful and vibrant prints, embellished with custom plastic cutouts.

The use of laser-cut, wearable materials today is both prolific on the runway and in the consumer fashion industry. Commercial stores such as Topshop sell laser-cut garments for under one hundred dollars, whereas high-fashion designers are also using technology to create impeccably made garments shown on the runways of Milan, Paris, London and New York. Laser cutting has a specific aesthetic that merges the use of technology into the industry.

Recently, design houses such as Fendi, Proenza Schouler and Burberry have explored the use of laser cutting in the fabrication of their collections. Fendi is an Italian brand that started in Rome in 1925 and is known for its use of fur and leather in both coats and handbags. Today, it has grown into a diverse brand with the help of Chanel designer Karl Lagerfeld, who has been involved with the company since the mid-1960s. Fendi's Spring 2014 ready-to-wear collection hit the runway in splashes of bright, bold-colored organza and leather, cut into geometric shapes. When vogue.com reviewed the collection, they stated that, Lagerfeld "was interested in the witty use of language in the digital world." Lagerfeld's uses of laser cutting created visually complex layers of space within the garments.

I had the fortune to see Fendi's collection in person while visiting Los Angeles last spring, in 2014. The garments were beautifully made, with intricate, laser-cut organza pieces layered on top of one another. Because silk organza is a translucent fabric, the garments had depth without the overuse of material. Seeing these garments in person added to my interest in using laser-cutting techniques in my senior Capstone project.

Another artist who has influenced me is Dutch fashion designer Iris Van Herpen. Attending the Artez Institute of the Arts Arnhem in the Netherlands, and interning at Alexander McQueen, Herpen started her own label in 2007, turning heads with her innovative, sculptural and organically inspired designs. She is most known for her experimentation with new materials

and technologies. “She creates a modern view on Haute Couture that combines fine handwork techniques with digital technology” (Herpen, About web). Many of her inspirations come from environmental influences such as architect Philip Beesley’s environments, which breathe and change as they interact with human subjects. She is also interested in forces that cannot be seen with the human eye, such as electricity and magnetism. Her garments extend the human body into shapes and expressions of her inspirations.

Iris Van Herpen’s collection *Voltage* in 2013 incorporated prolific use of 3D-printed fabrications. The collection was inspired by the interaction of electricity with the human body, expressing its movement and power. Herpen has been experimenting with 3D printing in her work since 2010, when the technology became more readily available for design applications. Neri Oxman, her partner in creating *Voltage*, explains, “The incredible possibilities afforded by these new technologies allow us to reinterpret the tradition of couture as 'tech-couture' where delicate hand-made embroidery and needle work is replaced by code” (Oxman, 2013). Forms that could not have been realized by fabric are now made possible by these new technologies

The exhibition *A Collection of Ideas*, featured at the Museum of Modern Art (MoMA) in New York City, was a great opportunity for me to become introduced to features of organic design in areas other than fashion. This exhibition included artists who explore and express “organic design in response to environmental and societal disruptions.” While visiting the exhibition, I explored the human understanding of organic design as a response to the environments in which we live. Neri Oxman, the same MIT professor who collaborated with Iris Van Herpen on her 3D fashions, featured work from her project *Materialecology* in this exhibition. The collection of studies done during her research was meant to explore the relationship between natural structure design and computational design tools, merging the two

systems and creating an outlet for designers and architects to apply these manufactured, organic forms to their own work:

Organic design refers not only the exploration of nature's forms and processes- facilitated by computers and other inorganic technology- but also the attempt to cope with the depletion of natural resources by imitating nature's economies and building methods. (MOMA, *A Collection Of Ideas*. 2014)

Visiting this exhibition helped me understand the history of organic design and the motives for its creation. Human recreation and interaction of an organic design seems to attempt to understand its natural mechanics and development. The technological modes for recreating organic design attempt to interact with the environment as the natural resource would do itself. We mimic the function and form of nature by means of current available technology in order to apply the design to other applications such as architecture, industrial design and fashion design.

The environment is something that can be simultaneously experienced as well as being represented through the "lens" of another medium. An image of a landscape metaphorically transports you to that location, establishing multiple ways of referencing memories and understandings of a place. Photographer Edward Burtysky's series, *Water*, influenced my inspiration for this Capstone project. He is an aerial photographer who captures the earth's landscape from the sky. Water in these images is introduced to the viewer as "a victim, a partner, a protagonist, a lure, a source, an end, a threat and a pleasure" (Russell Lord—Curator of Photography, MOMA). Burtysky's goal for these aerial photographs of water is to start a conversation about something essential to survival. The importance and scale of water is captured in these images, but is also framed as an exhaustible resource which we have a

responsibility to take care of. I was most drawn to the incredible patterns these images created.



Edward Burtysky, *Water* 2013

The earth becomes a pattern when looked at from above. The shapes of the landscape are repetitive, cohesive with Neri Oxman's *Materialecology* research study forms.

Another photographer that I found to be of interest when exploring my topic of environment and technology was artist Dayna Bartoli. She works as an ophthalmic photographer, taking images of the retinal blood vessels in human eyes. She digitally creates these "window-like" images that consist of overlaying retinal photographs with detailed images of organic material such as flowers, vines and dried pine brush. Her work is layered, similar to Fendi's laser-cut garments. The work becomes "about the visual patters and interactions that form between the images of the blood vessels and nature's flora fauna" (Dayna Bartoli, 2014).

Chapter 3

Development and Production

Digital Innovations, Environment and Fashion is the chosen topic for my Capstone project. The combining of environmentally inspired imagery with digital production methods speaks to the collaborative and conflating nature of our world today. We are preoccupied with our mobile technology platforms, over-stimulated by screen culture and under-developed in our appreciation for life immediately around us. The point of my collection is to embody this tension between the natural and artificial and explore human interaction with the environment and the garments themselves. I am a firm believer that clothing both changes and contributes to our surrounding environment. Creating garments that remind the wearer of their surroundings allows the individual to connect to both their environment and their clothing. The impact of technology is unavoidable in today's world. Using it as a tool to create garments that are tactile and inspiring creates a dialogue between modes of reality.

The medium of fashion allows me to witness my ideas coming to life on the human body. Clothes are to be experienced both visually and physically. When I choose my clothing in the morning, I base my choices on both my environment and the weather, which affects how I experience my surroundings. Clothing reflects our individual identities and anchors us to our cultural atmospheres. My garments connect individuals to personal experiences and their associated memories, creating a tactile and an emotional relationship with the person/wearer.

When I began to think about my thesis project more than a year ago, I started to recognize the challenges in picking a subject to explore. The door was finally wide open; inspiration was no longer contained by the limitations of an assignment. This posed a challenge, as my goal for this Capstone was to both produce something of which I am proud and something

that will have interest and worth in my industry. In making this decision, I asked myself not only what inspires me, but also what inspires me enough to create a project that will be the ending statement of my college career and beginning of my profession as a designer. Environment was my answer. Although broad and undefined in the beginning stages of development, it gave me a place to start. The notion of place, the everyday occurrence of our surroundings, and the observations of the natural cycles of the earth inspired my garment collection.

Growing up, I had the opportunity to travel all around the United States and Europe. Besides my education, travel is the greatest gift I have been given by my parents. I have seen the Alps in Germany, the Tuscan hillsides of Italy, the deep forests of Oregon, and the deserts of Arizona; each holds unique qualities and textures within its landscape. This physical introduction to just a few of the incredible landscapes of which our world is made provides infinite inspiration for me as a designer. Specific to this collection, I wanted to try to connect all of the ecosystems I have seen into one natural inspiration that collectively tells a story of my concept: environment and landscape.

In exploring how to achieve this goal, I needed to create my own definition of "landscape." I started to break down what I saw in inspirational images from the photographer Edward Burtysky, identifying aspects of the landscape I wanted to focus on. Using aerial views of the earth helped to blur elements such as vegetation, turning the environments I was exploring into prints and patterns from above, rather than literally translating the landscape itself. Besides becoming prints, the photographs also had depth and layers, creating visible dimension throughout the environment. Fabric can also hold all of these elements, functioning in similar ways in a garment. The next step for me was to realize these areas in a collection of six cohesive

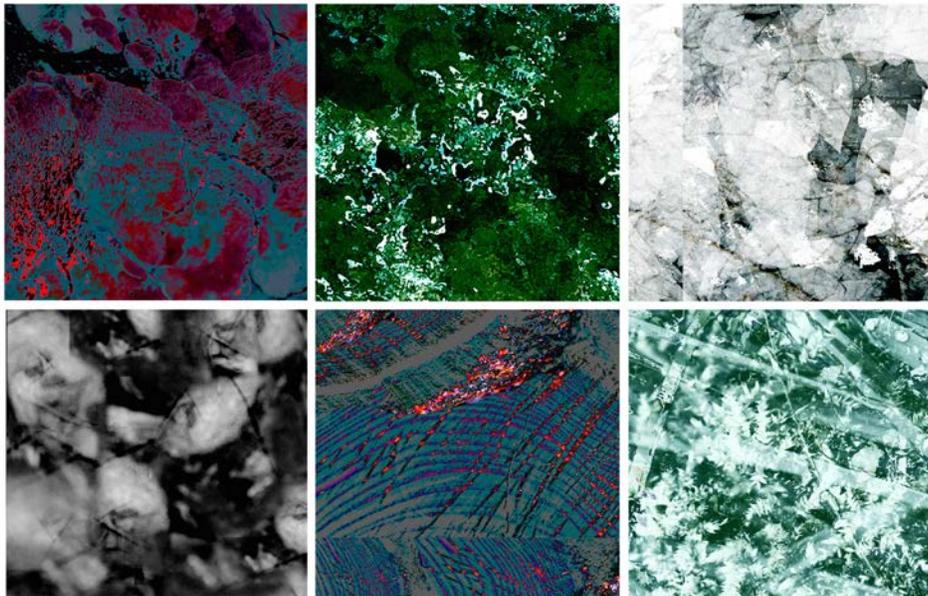
looks. I had to decide how these elements would all interact, relate and enhance each other aesthetically.

The second inspiration for this collection is technology. Because technology is so heavily incorporated into our everyday lives, I wanted to find a way to use it to my advantage, rather than ignoring practical and innovative tools that could be useful in realizing my vision. This tension between the natural and artificial speaks to the integration of today's world. Technology seems to be a way we are experiencing many environments. Virtually, we can travel to the other side of the earth and experience the streets of another country, while sitting in the comfort of our own homes. Technology is also involved in helping our planet, with the development of green, reusable energy, as well as helping to foster creativity with the development of 3D printing and laser cutting, which is used widely in many industries. These are just a few examples of how the world of both the artificial and natural are combining and interacting with one another. They create a discourse that highlights both the good and bad aspects of their coexistence. Technology can help to keep the earth clean and allow us to experience different environments in many ways. However, technology also creates pollution by helping industry create products that increase waste. This ongoing push and pull is the basis of my collection.

Because technology is prolific and can help in many ways, I wanted to use it in a way that would better my designs and further integrate the ideas of layering and depth in landscape and environment into a wearable three-dimensional garment. I found that using laser-cutting technology was the best way to achieve this goal. Laser cutting fabric was how I intended on achieving this depth within a garment. Being able to see beyond and into the layers of fabric creates an optical illusion that the fabric has become three-dimensional itself, revealing something about the garments underneath. My original idea for the use of the laser cutting would

be to see a printed fabric through the cutouts, revealing the 'landscape' as a digitally manipulated print of my own creation.

Creating my own prints meant that I was more connected to the concept and the textile itself. In the development of these prints, I used the resources around me. There was no way I was going to find myself in an airplane capturing my aerial views of my own, so, instead, I took a similar approach on a smaller scale. Instead of looking down on a widespread area of land, I looked closely at different ground level environments. Over Thanksgiving break, I went home to South Bend, Indiana, and took photographs of the environment in which I grew up. It was raining on the day I went out into our woods, making the vibrancy of the earth full and saturated. I took photographs of various niches within the landscape. Reviewing them and picking out the best and most dynamic images, I then manipulated these photographs into strange nonrepresentational prints, relating them to what they were before as well as transitioning them into something new. This digital fabric development and printing process allowed me to have a great deal of control over my garments' aesthetic.



Avery Gray, Digital Prints, 2014-2015

The entire spring semester I spent gathering the information, research and inspiration needed to design and produce my six-piece collection. The whole semester was devoted to refining my aesthetic and developing a cohesive look and feel for the garments I was going to create. My collection began with a preliminary idea of environment and technology and constantly changed. In the beginning, as I was exploring all the aesthetic options I had, one of the biggest challenges was finding the right aesthetic, one that I would be happy working with second semester, which would portray my conceptual idea as well as an aesthetic that somewhat fit industry ready-to-wear styles. My process for determining this was to sit in front of a wall in my room covered in inspirational images and sketch. I did this in series of 20-40 sketches a time, and then I would go back and edit my work the next day. It helped to see the drawings with fresh eyes and then start to collect and change the garments that were viable for production and that hit all the focal points which I wanted to get across in this collection.

During this initial design process, my research expanded as I found myself needing to fill gaps, or becoming re-inspired by something I had missed or had not researched fully earlier. Because of this, a hierarchy of design developed, meaning there were elements I found myself constantly coming back to, reworking into my collection. Along with this process, I was figuring out what was most important, in order to focus and refine my ideas and designs from there.

By the end of the designing process in the fall, semester I had developed a good idea of what the collection was going to look like. The pieces would consist of separates that can be easily mixed and matched, but would create a strong, unified look when worn as an entire ensemble. The demographic I targeted the collection at was professional, artistically engaged women. These design and commercial decisions led me to translate my concept of technology

and environment into wearable pieces of clothing. One of the challenges of designing only a six-look collection was deciding on the range of garments to include, when there were only six looks to provide an ample display of my talents and design ability. Not only did I want to provide a range to create interest within the collection, but also to show both casual and formal portfolio pieces to show to potential employers. Because of this, I simplified shapes and techniques into recognizable and understandable garments that can be easily worn. Doing this helped refine my concepts, as I started to understand how I was aesthetically going to translate environment and technology into the designs. The garments still needed to hold the value of my concept, but also to be wearable for the target audience.

The final product of all my designing, redesigning and production has a distinct aesthetic that translates this odd tension of landscape and technology into one cohesive look. As a whole, the collection has a clean edge, being finished well in diverse and simple fabrics. There are also both romantic and modern notes throughout, depending on the garment. The prints and the laser cut both work together and pull each other in different directions. The laser cuts are geometric and maintain a tension with the organic nature of the prints.



To help tell a story of the changing environment, and perhaps touch on different environments, the prints transition in color and texture throughout the collection. They are all monochromatic, each staying in the same color range as they transition from one to the next. The point of each look's being monochromatic was to help exemplify and distinguish the laser cutting and the print, so that the focus was on the two core elements of the collection.

It was a direct decision to use a variety of color in my collection, but the development of the specific colors that I ended up using came later in the process, when I was first starting to design my prints. As these prints developed, I let them dictate the pallet and range of color I would use. Of the strongest prints I designed, I would try them in several colorways, then determine which flowed well into each other. Each look has a new print, creating a story of the changing environment that also developed as the production of each garment developed. I think the exclusion of color would not have worked, as it would not live up to my inspiration. Nature produces some of the most magnificent pigments, and I wanted to enhance this, pushing it to the edge of artificial color. Silhouette was also an aesthetic component, relating mainly to

environmental inspirations rather than technology. Rounded sleeves, asymmetric cuts and billowing hemlines all added to the effect of my inspiration for the production of each garment. Even though I thought I had everything planned at the end of fall semester, designs changed as I started to see the garments come to life, one by one. They influenced each other and created stronger and more cohesive looks. As any creative will find out, initial plans often do not end up the same by the end of a project. The whole event of creating this collection was an experiment and a learning process from start to finish. One of the biggest things I learned was the reaction of the laser cutter to different fabrics and fibers and how these fabrics hold up to the cuts due to the nature of the technique used. In previous years of school projects, I was not drawn to printed textiles. I used solid, natural colors in wools or cottons. It wasn't until I took a Photoshop class and digital fabric printing class that I fell in love with the instant gratification and individuality of print creation using my own photographs. During the development of this project, I have become even more interested in print exploration and the role print plays in garments to help create a mood or feeling exemplifying a designer's concept. I will continue to develop my own prints in future collections.



All of the challenges I faced while developing this collection helped me to grow as a designer and artist. I now have more skills that I can apply to future projects and offer future employers. In the first semester, the biggest challenge was making the decision to focus on one theme for the entirety of the year. It was hard for me, as I am inspired by so many things that I couldn't imagine just sticking to one concept. However, now, going through the process, I can say I could design even more garments for this collection with greater ease because I have discovered what works and doesn't work in production. There were moments both semesters that I completely doubted the direction I had taken, but I knew that I had to continue and push through these doubts if I wanted to complete the collection by the scheduled Fashion Show on April 23rd.

Completing this project and being involved with one idea for a year has helped me grasp a greater understanding of both my own design aesthetic and the necessary production methods of a six-look collection. I can say now that I am very grateful for the opportunity to be so involved with a yearlong project, and I am proud and excited by the outcome. By exploring the

areas of laser cutting and digital printing, techniques with which I was not previously familiar, I have gained a wealth of knowledge that will help me in the current fashion industry with the emergence of new technologies and design techniques. This collection is just the first project of my career in the fashion industry. It is a relevant collection; both expanding horizons of design and helping me reach my goal of creating an intelligent and culturally significant work for my generation.



Senior Collection, Fashion Show, April 23rd 2015, Avery Gray

Works Cited

- "About | Iris Van Herpen." *Iris Van Herpen*. N.p., 2012. Web. 18 Dec. 2014.
- Antonelli, Paola. "A Collection of Ideas, An Exhibition." *MoMA*. Hyundai Card and Hyundai Capital America., n.d. Web. Nov. 2014.
- Burzynsky, Edward. *Water*. N.p.: Steidl, 2013. Print.
- The Creators Project. "Leaders Of The 3D Printing Revolution." *YouTube*. Shapeways, 14 Jan. 2013. Web. 14 Nov. 2014.
- Desiree Bartoli, Dayna. "Dayna Desiree Bartoli." *Dayna Desire Bartoli*. N.p., 2014. Web. 20 Dec. 2014.
- The Editors of Encyclopedia Britannica. "Isaac Merrit Singer | Biography - American Inventor." *Encyclopedia Britannica Online*. Encyclopedia Britannica, n.d. Web. 20 Dec. 2015.
- Estes, Adam. "Inside Shapeways, the 3D-Printing Factory of the Future." *Gizmodo*. Shapeways, 20 June 2014. Web. 15 Nov. 2014.
- Grozdanic, Lidija. "Architects That Are Pushing Fashion Into the Future." *Architizer*. Architizer.com, 03 July 2014. Web. 3 Dec. 2014.
- Holgate, Mark. "Fendi Spring 2014." *Vogue*. Vogue.com, 19 Sept. 2013. Web. 20 Nov. 2014.
- Katrantzou, Mary. "Mary Katrantzou's Biography | Fashion Designer | Mary Katrantzou." *Mary Katrantzou's Biography | Fashion Designer | Mary Katrantzou*. Mary Katrantzou, n.d. Web. 14 Jan. 2014.
- Krick, Jessa. "Heilbrunn Timeline of Art History." *Charles Frederick Worth (1825–1895) and The House of Worth*. Metropolitan Museum of Art, Costume Institute, Oct. 2004. Web. 20 Nov. 2014.

Materilise. "Iris Van Herpen Debuts Wearable 3D Printed Pieces at Paris Fashion Week." *Iris Van Herpen Debuts Wearable 3D Printed Pieces at Paris Fashion Week*. Materialise, 31 Jan. 2013. Web. 20 Dec. 2014.

Van Herpen, Iris, and Neri Oxman. "3D Printed Dress on the Catwalk at Paris Fashion Week." *YouTube*. Stratasys, For a 3D World, 30 Jan. 2013. Web. 15 Dec. 2014.

Van Herpen, Iris, and Neri Oxman. "3D Printed Dress on the Catwalk at Paris Fashion Week." *YouTube*. Stratasys, For a 3D World, 30 Jan. 2013. Web. 15 Nov. 2014.

Williams-Alvarez, Jennifer. "What You Need to Know about Laser-cut Clothing." *Engadget*. Engadget.com, 17 June 2014.